

March 7, 1989

TO: Wayne Hedberg, Permit Lead

FROM: Scott Johnson, Reclamation Engineer 

RE: Permit Revision Review, Crystal Peak Minerals, Sevier Dry Lake Project,
M/027/008, Millard County, Utah

I have completed my review of the latest submittal of Crystal Peaks Minerals Corporation, received January 5, 1989, for the Sevier Dry Lake Project. Below are my comments:

R613-004-106 Operation Plan

The operator will install a temporary railcar loadout at the Black Rock siding on the Union Pacific railroad. A permanent facility will be constructed in 1991.

The loadout is approximately 30 miles from the salt stockpile and processing facilities. If the Division decides to include the reclamation of these facilities in the surety estimate, the operator will need to submit a detailed map showing affected acreages.

R613-004-111 Reclamation Practices

Utah Power and Light will construct a 46 KV power transmission line from the Milford substation to the plant site. This line will be 26.5 miles long and involve an area of 96 acres (30 foot right-of-way). This is not a 1989 project.

The operator plans to use the Black Rock Siding for a railcar loadout. A temporary facility will be used in 1989. Is this facility going to be considered an on-site property?

R613-004-113 Surety

On March 31, 1988, the Board approved the surety amount of \$53,000 for the reclamation of the disturbance to date. This amount includes the costs required for the deliberate flooding of the pond complex using the existing pumps. The operator indicates that the borrow area and water wells have been partially reclaimed. The current reclamation liability is \$51,000 (\$46,100 plus contingency) in 1989 dollars.

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The 1989 construction will disturb an additional 24.1 acres (not associated with the solar pond complex construction of the dikes and ditches). This disturbance is 22.6 acres for the Salt wash plant and storage pad, and 1.5 acres for the buried process water line.

Total required surety -- including 1988 year-to-date disturbance -- is \$137,000 (1994 dollars). The BLM is holding a \$53,000 bond; therefore, an additional \$84,000 is needed from Crystal Peak. A reclamation estimate is attached.

attachment

jb
cc: Holland Shepherd
MN60/11-12

Reclamation Estimate for Crystal Peak Minerals Corporation
Sevier Dry Lake Project M/027/008 **Page 1 of 2**

Prepared By
 Utah State Division of Oil, Gas and Mining
 March 06, 1989

Description	Quantity	Unit	\$/Unit	Total Cost (\$)
Pond System Reclamation (a)				
Pumping into Ponds to Breach Dikes		Lump Sum		17,500
Labor and Vehicles		Lump Sum		20,000

Subtotal				37,500
1987 and 1988 Construction Reclamation				
Borrow Area - Grade for Uniformity		Lump Sum		1,100
Borrow Area - Revegetate		Lump Sum		6,800
Plug Water Wells		Lump Sum		5,000
Campsite		Lump Sum		3,500

Subtotal				16,400
Less Completed Reclamation (b)				8,800

Total Reclamation Cost for pre-1989 Disturbances (1988 dollars) (c)				45,100
			(1989 dollars)	46,100
Salt Wash Plant and Facilities Reclamation				
Remove Conveyors and Structures	1,200	Feet	3.50	4,200
Remove Hoppers, Screens, Pumps, Etc.		Lump Sum		3,000
Remove Trash	22.6	Acres	100	2,260
Rip Salt Pad (1 foot depth)	22.6	Acres	172	3,890
Haul Salt Pad to Nearest Pond	36,500	Cubic Yards	0.66	23,920
Grade for Uniformity	22.6	Acres	323	7,300
Replace Topsoil	18,230	Cubic Yards	0.80	14,580
Revegetate	22.6	Acres	318	7,190

Subtotal				66,340
Process Water Line Reclamation				
Revegetate	1.5	Acres	318	480
Total 1989 Proposed Disturbance				66,820
				=====
Totals (Disturbances through 1989)				112,920
Add Contingency (10%)				11,290

TOTAL RECLAMATION COST (1989 Dollars)				124,210
TOTAL RECLAMATION COST (1994 Dollars) @ 1.93% Annual Inflation				137,000

Reclamation Estimate for Crystal Peak Minerals Corporation
Sevier Dry Lake Project M/027/008 **Page 2 of 2**

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- (a) This amount includes the reclamation of constructed and proposed dikes and ditches in the solar pond complex. When all facilities are constructed, these figures will be reviewed.
- (b) The borrow area was apparently partially reclaimed. Also, some of the water wells may have been reclaimed. The Division will need to verify this work during a field visit.
- (c) The amount of surety required for this work (\$53,000) was accepted by the Board of Oil, Gas and Mining on March 31, 1988.

Cost Parameters Used

988B Wheel Loader (O&O)	165	\$/hour
769C Off-Highway Truck (O&O)	100	Cubic Yards/hour
D-8 Dozer (O&O)	160	\$/hour
Labor Only	24	\$/hour
Trash Removal	100	\$/acre
Farm Tractor (O&O)	67	\$/hour
Speed	4	mph
Width of Pass	6	feet

Revegetation Cost per Acre	Quantity	Unit	\$/Unit	Total Cost (\$)
Bare Costs				
Seed Mix	24.9	Pounds	9.92	247
Application Costs				
Seed Mix (using drill seeder)	0.5	Hours	95	48
Scarify (tractor with chain)	0.3	Hours	67	23
Subtotal				71
Total Revegetation Cost per Acre				318